CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-2/754/CEMENT/2014-15

Date: 05.02.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer**, T. Dasarahalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
***NAME OF THE WORK**	:	Improvements to road, drain & footpath 4th,5th,6th & 7th Cross Vishveshwaraiaha layout in Bagalagunte Ward No.14, BBMP, Bangalore.
***REFERENCE**	:	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.02.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	02.02.2015
PERIOD OF TESTING	:	02.02.2015 to 05.02.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	165 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	465 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

VISHWANATH. I.A.
Chief Executive Officer

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-2/754/SAND-Gradation/2014-15 : 05.02.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.T. Ravikumar,**
No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.

*** Name of Work** : Improvements to road, drain & footpath 4th,5th,6th & 7th Cross Vishveshwaraiaha layout in Bagalagunte Ward No.14, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.02.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 02.02.2015

Date of Testing : 05.02.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	94.10	90-100	90-100	90-100	95-100
2.36	76.10	60-95	75-100	85-100	95-100
1.18	58.60	30-70	55-90	75-100	90-100
600 Micron	28.10	15-34	35-59	60-79	80-100
300 Micron	12.30	5-20	8-30	12-40	15-50
150 Micron	6.70	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-2/754/AGG/GR/2014-15 : 05.02.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
* Name of Work	: Improvements to road, drain & footpath 4th,5th,6th & 7th Cross Vishveshwaraiaha layout in Bagalagunte Ward No.14, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.02.2015
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 02.02.2015
Date of Testing	: 05.02.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.85	95-100	85-100
20	42.20	30-70	0-20
10	20.05	10-35	0-5
4.75	4.20	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-2/754/CC Solid Block/2014-15 : 10.02.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
* Name of the Work	: Improvements to road, drain & footpath 4th,5th,6th & 7th Cross Vishveshwaraiaha layout in Bagalagunte Ward No.14, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.02.2015
Sample Received on	: 02.02.2015
Date of Testing	: 10.02.2015
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	34.26	262.5	3.28	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.10	261.4	3.27	
3	Block 3	34.62	260.5	3.26	
4	Block 4	35.23	259.3	3.24	
5	Block 5	36.25	260.4	3.26	
6	Block 6	34.85	261.3	3.27	
7	Block 7	35.62	262.8	3.29	
8	Block 8	34.98	263.8	3.30	

*Information is furnished by the Customer/Representative.

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-2/754/Pre Cast Slab/2014-15 16.02.2015

TEST REPORT ON CONCRETE CORE (PRE CAST SLAB)

* Name of Customer	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
* Name of work	:	Improvements to road, drain & footpath 4th,5th,6th & 7th Cross Vishveshwaraiaha layout in Bagalagunte Ward No.14, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.02.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Pre Cast Slab
Sample Received on	:	12.02.2015
Date of Testing	:	16.02.2015

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	80.00	0.393	2501.92	1.60	0.960	32.25	16.42	17.74	17.03	21.29
2	50.00	81.00	0.399	2508.75	1.62	0.965	32.90	16.76	18.10	17.46	21.83
3	50.00	82.00	0.406	2521.64	1.64	0.970	33.65	17.14	18.51	17.95	22.44

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-2/754/CUBE/2014-15 25.03.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.
* Name of the work	: Improvements to road, drain & footpath 4th,5th,6th & 7th Cross Vishveshwaraiaha layout in Bagalagunte Ward No.14, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.02.2015
* Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{15}
Compressive Strength as on	: 28th day
Sample Received on	: 25.02.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2015	25.03.2015	8.098	345.8	15.37
2	25.02.2015	25.03.2015	8.190	352.6	15.67
3	25.02.2015	25.03.2015	8.261	364.8	16.21

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Job No.: CTCE/BBMP/W.No.14/BTRK/CSR-2/754/CUBE/2014-15 28.03.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. B.T. Ravikumar,** No.180, 3rd Main, H.V.R. Layout, Magadi Road, Bangalore – 560079.

*** Name of the work** : Improvements to road, drain & footpath 4th,5th,6th & 7th Cross Vishveshwaraiaha layout in Bagalagunte Ward No.14, BBMP, Bangalore.

*** Reference** : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 02.02.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{15}

Compressive Strength as on : 28th day

Sample Received on : 28.02.2015

Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	28.02.2015	28.03.2015	8.177	355.5	15.80
2	28.02.2015	28.03.2015	8.290	365.4	16.24
3	28.02.2015	28.03.2015	8.398	378.3	16.81

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